



Cargille Laboratories
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Catalog # 1815

Typical Characteristics

Refractive Index Liquid **Series M**
 Refractive Index **1.79500** at 589.3 nm and 25 ° C

Compositition Diiodomethane, Sulfur and Tin Iodide
 Appearance Light Yellow to Dark Red Liquid
 Odor Slight: unpleasant
 Color Stability In Direct Sun: may darken after 1 day, quite dark after 1 month
 Index Change Rate High : +0.00098 to +0.00115
 by Evaporation expected after 32 days with exposed surface area to volume ratio of 0.2 cm²/cc @ 25 °C

Index at 20°C 1.79853
 Pour Point ** °C
 Boiling Point > 180 °C (760 mm Hg)
 Flash Point > 110 °C (COC)
 Brix Value (Per ICUMSA) >100 at 20°C
 Density 3.130 g / cc at 25 °C
 Density Temp Coef -0.0023 g / cc / °C
 Coef of Thermal Expansion 0.0007 cc / cc / °C
 Thermal Conductivity n/a cal / sec / cm² / °C - 1 cm thickness
 Viscosity 2 cSt at 25 °C 8 cP at 25 °C
 Surface Tension 32 dynes/cm at 25 °C

Soluble n/a

Partly Soluble Acetone, Carbon Tetrachloride, Ethyl Ether, Methylene Chloride, Toluene, Xylene

Insoluble Ethanol, Heptane, Naphtha, Turpentine, Water

Compatible 3 Week Immersion at 25 °C : Acrylic, Mylar, Polyester, Polyethylene, Polypropylene, Phenolic, Silicone (3140 RTV) and Fluorosilicone (Silastic 730 RTV) Rubbers

Incompatible Cellulose Acetate, Epoxy, Nylon, Polycarbonate, Polystyrene, Polyurethane, Polyvinyl Chloride, Latex, Neoprene, Silicone (Sylgard 184) Tygon, Aluminum, Brass, Copper, Steel

** : Crystals will form between 10 - 15 °C. Whole liquid will freeze below 6 °C



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Cauchy Coefficients A B C
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Cauchy Equation at 25°C $A + B / \lambda^2 + C / \lambda^4$ (λ = Wavelength in nm)

Wavelength (nm)	Refractive Index	Transmittance			
		0.1 mm	1 mm	1 cm	10 cm
225.0	-	-	-	-	-
240.0	-	-	-	-	-
250.0	-	-	-	-	-
270.0	-	-	-	-	-
290.0	-	-	-	-	-
308.0	-	-	-	-	-
355.0	-	-	-	-	-
365.0	-	-	-	-	-
406.0	-	-	-	-	-
473.0	-	-	-	-	-
532.0	1.8116	86	22	0	0
589.3	1.7950	98	81	12	0
632.8	1.7854	99	92	45	0
656.3	1.7810	99	94	53	0
790.0	1.7631	99	95	60	1
828.0	1.7595	100	98	82	14
981.0	1.749	100	99	94	54
1310.0	1.738	100	100	99	91
1550.0	1.734	100	100	97	74
2500.0	-	-	-	-	-
3700.0	-	-	-	-	-

($n_F - n_C$) 0.0485

Abbe v_D 16.4

Temp. Coefficient -0.000707 dn_D/dt (15 - 35 °C)

Shelf Life: 18 Months from Date of Manufacture for Unopened Bottles; Half the Remaining Time after Opening